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Ratings by Officer Groups of Importance and Obtainability of Selected Job Characteristics

By

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Technical Documentary Report PRL-TDR-64-4
February 1964

6570TH PERSONNEL RESEARCH LABORATORY
AEROSPACE MEDICAL DIVISION
AIR FORCE SYSTEMS COMMAND
Lackland Air Force Base, Texas

Project 6755, Task 675501

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**RATINGS BY OFFICER GROUPS OF IMPORTANCE AND
OBTAINABILITY OF SELECTED JOB CHARACTERISTICS**

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ABSTRACT

To determine how different groups of officers value an Air Force career, 22 possible job rewards were rated by 1300 former AFIT students as to their importance and the possibility of obtaining them as Air Force officers. Responses were analyzed by 4 dichotomous groupings: (a) active duty officers vs those who had resigned or retired; (b) scientific and engineering officers vs nonscientists; (c) young officers vs older officers; and (d) rated vs nonrated officers. Differences in ratings by the paired groups were evaluated by computing an overall chi square for the distributions on each job characteristic. In general, rewards rated as most attainable were rated as least important. Distributions of the ratings differed significantly for 81 of the 176 pairs, indicating that the attitudes and value systems of various groups of officers are different.

Keywords: job characteristics, officer personnel, rating scales, group differences, military attitudes, chi square, scientific officers, rated officers, retired officers, Air Force Institute of Technology, student officers

This report has been reviewed and is approved.

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RATINGS BY OFFICER GROUPS OF IMPORTANCE AND OBTAINABILITY OF SELECTED JOB CHARACTERISTICS

In recent years military psychologists have delved deeply into the area of retention of qualified personnel. Most of this work has been centered around the use of biographical information. Attitudinal variables have, to a large extent, been ignored because their relationship to job performance or retention has not been firmly established. It is quite possible that the negative findings are more the result of methodological shortcomings than of nonexistent relationships. One defect found in many studies has been the grouping together of different types of workers, thereby ignoring the fact that within any large organization there are subgroups with different value systems. For example, in industrial relations activities it is common to find some departments cooperative while others prove to be troublesome. Another failing of the typical attitude survey is that it finds out what are the employees' attitudes toward various working conditions but, as has been pointed out by others (Glennon et al. 1960), does not provide for an expression of what the employee feels is important enough to become upset about. Rotter (1960), in his social learning theory, defines behavior as a function of the expectancy of occurrence of reinforcement and the value of reinforcement. In the job situation, job rewards could be considered reinforcement and, thus, behavior on the job would be a function of the expectancy of occurrence of job rewards and the value of these job rewards to the individual.

The purposes of this paper are to demonstrate that the members of an organization should be divided into subgroups when measuring their attitudes and to illustrate an attitude survey technique which obtains information about what workers consider to be the possibility of obtaining job rewards and how important these rewards are to the individual.

1. PROCEDURE

Information about the attitudes and career experiences of former students of the Air Force Institute of Technology (AFIT) was obtained by means of a questionnaire mailed to graduates of the 1955-56 classes (Harding et al. 1963). While the chief purpose of the survey was to determine the utilization, attitudes, and retainability of the officers who participated in the AFIT program, the focus of this report will be an analysis of the officers' ratings of 22 job rewards or attributes. These job rewards are listed in the sample rating form shown in the Appendix. The list includes such job aspects as: keeping busy; having prestige or social status; making a lot of money; promotion on the basis of ability; adequate job security.

The respondents were asked to rate each job reward in terms of its importance to them and the possibility of obtaining the reward while in the Air Force. Each rating was made on a 5-point scale as indicated for the five choices: A, B, C, D, E. Rating scores ranged from 1 for E to 5 for A.

2. ANALYSIS

The sample of respondents was divided into four pairs of subgroups and comparisons between the groups attitudes were made. The first pair of subgroups consisted of (a) 1130 respondents who had remained in the Air Force; and (b) 240 respondents who had left the Air Force since completing their AFIT training. After analyzing the ratings of these groups, the sample was reconstructed and divided into a second pair consisting of (a) 735 respondents who were performing scientific or engineering work; and (b) 640 nonscientific officers. The third grouping consisted of (a) 320 young respondents, defined as those who had less than

three years of service prior to entry into the AFIT program; and (b) 695 older respondents, defined as those having more than eight years of service prior to entry into AFIT. Finally, the sample was divided into (a) 1545 rated; and (b) 585 nonrated officers.¹ For the remainder of this report we shall consider membership in a subgroup as a status factor.

Differences in the distributions of ratings of each pair of subgroups were analyzed by means of chi square. The contingency tables constructed were of two types: (a) the importance ratings by status factor, a 10-cell table, one frequency cell each for combinations of the five levels of importance ratings with one of the two status factors; and (b) a similar 10-cell table combining the possibility rating levels and the status factors.

3. RESULTS

Differences in the distributions of the ratings given by the subgroups were evaluated for the 176 contingency tables by means of chi square. Overall, 81 of these chi squares were found to be significant. Asterisks in Tables 1-4 identify the job rewards for which the subgroups differed significantly in the distribution of their ratings.

The mean ratings given the job rewards by the various groups of respondents are shown in the four tables. It should be pointed out that there are two very different sets of conditions which, if either exists, would cause two distributions to exhibit a significant chi square. In one case, the shape of the two distributions is the same or almost the same and the mean of one is higher than the mean of the other. In the second case, the means may be virtually the same, but the shapes of the distributions are markedly different. For instance, one distribution may approach normalacy, while the other is rectangular or bimodal.

In the tables there are some instances of this second case; the mean responses of two groups are rather close together, and yet the chi square tests are significant. The means are presented as summary data in preference to presenting the contingency tables themselves and the reader is reminded that the statistical significance cited is based on chi square and not a test of mean differences.

The job attribute rated as most important by all of the subgroups was "Feel that you are accomplishing something." The next most important aspect was "Be promoted on the basis of ability." The reward with the third highest rating was "Have competent supervisors." Other job rewards which received high ratings were "Work under consistent and intelligent personnel policies" and "Be given recognition for work well done."

The job aspects receiving the lowest importance ratings were: "Do a great deal of traveling," "Frequent change of duties," and "Settle down in a certain area."

Turning now to the ratings of the possibility of obtaining the job reward while in the Air Force, it is found that the job reward perceived by all the subgroups as being the most obtainable during Air Force service is "Be able to retire at an early age." Other aspects receiving high ratings are: "Do a great deal of traveling," "Frequent change of duties," and "Adequate job security."

The job rewards least likely to be obtained during an Air Force career are: "Settle down in a certain area," "Make a lot of money," "Work under consistent and intelligent personnel policies," and "Be promoted on the basis of ability."

The job aspects which are rated as most obtainable tend to be rated low in terms of importance. For all subgroups the rank-order correlations between the Importance ratings and the Obtainability ratings of the 22 aspects were negative; the Out-of-Service group had the greatest negative correlation, -.50. What this means is subject to conjecture. It may indicate

¹ Total N's varied because of incomplete data and omitted responses.

that the Air Force offers rewards which are of little importance to its personnel, or it may indicate that once a job reward is readily obtainable it becomes less important to the individual. Whatever the reason, the ratings do provide useful information to personnel planners.

Active Duty vs Separated and Retired Officers

When the subgroups consisted of those in or out of the Air Force (Table 1), there were 18 significant differences in the ratings of Possibility of Obtaining and 12 in the Importance ratings. For the most part it was found that the in-service group saw greater possibility of obtaining these job rewards while in the Air Force than did the "outs." Differences in the Importance ratings show that performing work of which their families can be proud, job security, early retirement, and consistent personnel policies were more important to the in-service group than to the "outs." The out-of-service group considered being in a competitive situation, making lots of money, having a say in what happens to them, and becoming proficient in a specialized type of work as being relatively more important to them. That these ratings are measuring important factors of motivation is evidenced by the fact that in other studies (Harding et al., 1962) the desire to get ahead on their own ability and to have more control over their futures were found to be prime reasons why young officers separate from the Air Force.

Table 1. Mean Ratings by Active Duty Officers vs Separated and Retired Officers

Job Characteristic	Possibility		Importance	
	In	Out	In	Out
1. Frequent change of duties	*3.98	3.91	2.46	2.41
2. Keep very busy	*4.20	3.41	3.90	3.90
3. Have prestige or social status	*3.37	3.23	3.63	3.54*
4. Do work of which my wife & family can be proud	*3.98	3.56	4.18	3.98*
5. Continue flying	*2.50	3.43	2.69	1.96*
6. Be given recognition for work well done	*3.23	2.59	4.42	4.33
7. Make a lot of money	2.00	1.85	3.06	3.27*
8. Have competent supervisors	*3.15	2.76	4.58	4.56
9. Be able to retire at an early age	*4.35	4.50	2.91	2.37*
10. Advance at a fairly rapid rate	*2.56	2.28	3.96	4.05
11. Spend a lot of time with my family	*2.96	3.00	3.53	3.64*
12. Be promoted on the basis of ability	*2.67	2.24	4.62	4.66
13. Settle down in a certain area	*1.78	1.58	2.53	3.25*
14. Have a definite work schedule	*2.66	2.81	2.74	2.66
15. Obtain a good salary	*2.74	2.59	4.05	4.01
16. Be in a competitive situation	*3.34	2.62	3.77	3.82*
17. Become proficient in a specialized type of work	*3.47	3.29	3.44	3.66*
18. Do a great deal of traveling	4.19	4.16	2.52	2.31
19. Feel that you are accomplishing something	*3.73	3.13	4.81	4.78
20. Have a say in what happens to you	*2.65	2.25	4.16	4.41*
21. Work under consistent and intelligent personnel policies	2.46	2.33	4.44	4.29*
22. Adequate job security	3.93	3.91	3.80	3.37*

* Indicates distributions of job reward ratings significantly different ($P < .05$) for the subgroups being compared.

Scientist vs Nonscientists

When the two subgroups being compared are scientist and nonscientist (Table 2), the nonscientists tended to see greater possibilities of obtaining the job rewards while in the Air Force than did the scientists. At a time when the Air Force's mission is becoming more scientifically oriented this is unfortunate. It indicates that it will be difficult to attract and hold scientifically inclined officers because they see little chance of realizing job satisfaction while in service. As to the importance of the various job rewards, the only job attribute that the scientist rated more important than did the nonscientist was to settle down in a certain area, a condition not easily obtained while in the Air Force. The nonscientist felt it more important to have status or prestige, recognition, be competitive, and to travel a great deal.

Table 2. Mean Ratings by Scientists vs Nonscientists

Job Characteristic	Possibility		Importance	
	Scien- tist	Non Scien- tist	Scien- tist	Non Scien- tist
1. Frequent change of duties	*3.92	4.02	2.48	2.44
2. Keep very busy	*3.99	4.16	3.86	3.96
3. Have prestige or social status	*3.26	3.45	3.46	3.73*
4. Do work of which my wife & family can be proud	3.79	3.93	4.04	4.26*
5. Continue flying	*2.51	2.77	2.30	2.83*
6. Be given recognition for work well done	*3.07	3.22	4.35	4.47*
7. Make a lot of money	*1.92	2.12	3.12	3.07*
8. Have competent supervisors	3.03	3.13	4.55	4.61
9. Be able to retire at an early age	4.37	4.37	2.80	2.83*
10. Advance at a fairly rapid rate	*2.42	2.64	3.96	3.98
11. Spend a lot of time with my family	2.77	2.72	3.52	3.58
12. Be promoted on the basis of ability	*2.43	2.67	4.61	4.66
13. Settle down in a certain area	1.75	1.73	2.77	2.53*
14. Have a definite work schedule	2.67	2.71	2.70	2.76
15. Obtain a good salary	*2.54	2.91	4.03	4.06
16. Be in a competitive situation	*2.97	3.25	3.71	3.86*
17. Become proficient in a specialized type of work	*3.32	3.58	3.52	3.51
18. Do a great deal of traveling	4.15	4.23	2.46	2.58*
19. Feel that you are accomplishing something	*3.55	3.72	4.76	4.81
20. Have a say in what happens to you	2.37	2.59	4.20	4.18
21. Work under constant and intelligent personnel policies	2.40	2.48	4.37	4.47
22. Adequate job security	3.91	3.95	3.67	3.78

*Indicates distributions of job reward ratings significantly different ($P < .05$) for the subgroups being compared.

Young vs Old Officers

When the comparison is between the ratings of the young and old officers (Table 3) some interesting facts come to light. As would be expected, the older officers see a little more chance of obtaining the job rewards while in the Air Force than do the younger officers. Which rewards do the younger officers consider to be more important? They want to make a lot of money, to make rapid advancement, to be proficient in a specialized area, to settle in a certain area, and to have a say in what happens to them. It is also important to them to spend time with their families. The older officers were higher in their ratings of the importance of prestige, family pride, receiving recognition for good work, and working under consistent and intelligent personnel policies. These differences are probably indicative of changing value systems as the officer grows older and becomes aware of the limitations of his potential. They also point up a difficulty inherent in military personnel administration where older, more established officers attempt to develop policies which will prove attractive to younger officers. It is obvious that a great deal of empathy is required to accomplish this.

Table 3. Young Officers vs Older Officers

Job Characteristic	Possibility		Importance	
	Young	Old	Young	Old
1. Frequent change of duties	*3.89	3.99	2.43	2.44*
2. Keep very busy	*3.67	4.20	3.84	3.87
3. Have prestige or social status	*3.28	3.44	3.45	3.64*
4. Do work of which my wife & family can be proud	*3.65	3.95	4.00	4.21*
5. Continue flying	*2.77	2.74	1.64	2.85*
6. Be given recognition for work well done	*2.99	3.22	4.35	4.44*
7. Make a lot of money	2.00	2.10	3.19	3.04*
8. Have competent supervisors	*2.92	3.16	4.44	4.57
9. Be able to retire at an early age	4.46	4.35	2.63	2.84*
10. Advance at a fairly rapid rate	*2.49	2.64	4.06	3.88*
11. Spend a lot of time with my family	*2.91	2.66	3.64	3.51*
12. Be promoted on the basis of ability	*2.41	2.67	4.67	4.60
13. Settle down in a certain area	*1.61	1.76	2.94	2.57*
14. Have a definite work schedule	2.68	2.67	2.81	2.75
15. Obtain a good salary	*2.55	2.88	4.08	4.05
16. Be in a competitive situation	*2.84	3.21	3.78	3.78
17. Become proficient in a specialized type of work	3.47	3.46	3.70	3.48*
18. Do a great deal of traveling	4.24	4.21	2.48	2.52
19. Feel that you are accomplishing something	*3.33	3.70	4.81	4.77
20. Have a say in what happens to you	*2.44	2.61	4.36	4.12*
21. Work under consistent and intelligent personnel policies	2.48	2.42	4.30	4.46*
22. Adequate job security	4.00	3.88	3.63	3.80*

* Indicates distributions of job reward ratings significantly different ($P < .05$) for the subgroups being compared.

Rated vs Nonrated Officers

Table 4 shows that the rated subgroup felt it more important to have prestige and social status, to work under consistent and intelligent policies, and, of course, to continue flying than did their nonrated counterparts. The nonrated officers were more interested in becoming proficient in specialized work and in being able to retire at an early age.

Table 4. Mean Ratings of Rated vs Nonrated Officers

Job Characteristic	Possibility		Importance	
	Rated	Non-Rated	Rated	Non-Rated
1. Frequent change of duties	4.02	3.94	2.41	2.51
2. Keep very busy	4.22	4.19	3.88	3.93
3. Have prestige or social status	*3.17	3.33	3.70	3.57
4. Do work of which my wife & family can be proud	3.95	3.91	4.27	4.11*
5. Continue flying	*3.11	1.92	4.01	1.44*
6. Be given recognition for work well done	3.25	3.21	4.42	4.43
7. Make a lot of money	2.05	1.96	3.06	3.07
8. Have competent supervisors	3.15	3.16	4.63	4.54
9. Be able to retire at an early age	4.33	4.35	2.78	3.03*
10. Advance at a fairly rapid rate	2.61	2.50	3.92	4.00
11. Spend a lot of time with my family	*2.59	2.78	3.52	3.54
12. Be promoted on the basis of ability	2.63	2.57	4.59	4.66
13. Settle down in a certain area	1.76	1.80	2.48	2.58
14. Have a definite work schedule	*2.57	2.75	2.70	2.77
15. Obtain a good salary	*2.85	2.64	4.03	4.08
16. Be in a competitive situation	*3.27	3.13	3.78	3.76
17. Become proficient in a specialized type of work	3.93	3.51	3.37	3.59*
18. Do a great deal of traveling	*4.26	4.13	2.56	2.52
19. Feel that you are accomplishing something	3.73	3.74	4.81	4.77
20. Have a say in what happens to you	2.60	2.69	4.17	4.12
21. Work under consistent and intelligent personnel policies	*2.39	2.53	4.52	4.37*
22. Adequate job security	*3.90	3.97	3.73	3.86

* Indicates distributions of job reward ratings significantly different ($P < .05$) for the subgroups being compared.

4. CONCLUSIONS

The conclusions to be drawn from these data are that there are significant differences in the attitudes and value systems of various subgroupings of individuals within the Air Force. This finding supports the contention that attitude surveys should consider different types of employees separately.

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APPENDIX: Rating Form

People differ in what they want from their jobs. Rate the following statements in terms of their IMPORTANCE TO YOU. Indicate your answers by circling the appropriate letter following each statement.

- A. Extremely important
- B. Somewhat above average in importance
- C. Of average importance
- D. Somewhat below average in importance
- E. Not important at all

Adequate job security	A	B	C	D	E
Work under consistent and intelligent personnel policies	A	B	C	D	E
Have a say in what happens to you	A	B	C	D	E
Feel that you are accomplishing something	A	B	C	D	E
Do a great deal of traveling	A	B	C	D	E
Become proficient in a specialized type of work	A	B	C	D	E
Be in a competitive situation	A	B	C	D	E
Obtain a good salary	A	B	C	D	E
Have a definite work schedule	A	B	C	D	E
Settle down in a certain area	A	B	C	D	E
Be promoted on the basis of ability	A	B	C	D	E
Spend a lot of time with my family	A	B	C	D	E
Advance at a fairly rapid rate	A	B	C	D	E
Be able to retire at an early age	A	B	C	D	E
Have competent supervisors	A	B	C	D	E
Make a lot of money	A	B	C	D	E
Be given recognition for work well done	A	B	C	D	E
Continue flying	A	B	C	D	E
Do work which my wife and family can be proud of	A	B	C	D	E
Have prestige or social status	A	B	C	D	E
Keep very busy	A	B	C	D	E
Frequent change of duties	A	B	C	D	E

Go on to the next page.

APPENDIX, (Continued)

What is the POSSIBILITY OF OBTAINING the following rewards or working conditions WHILE IN THE AIR FORCE? Use the following scale and indicate your answers by circling the appropriate letter following each statement.

- A. Very good
- B. Better than average
- C. Average
- D. Less than average
- E. None at all

Frequent change of duties	A	B	C	D	E
Keep very busy	A	B	C	D	E
Have prestige or social status	A	B	C	D	E
Do work which my wife and family can be proud of	A	B	C	D	E
Continue flying	A	B	C	D	E
Be given recognition for work well done	A	B	C	D	E
Make a lot of money	A	B	C	D	E
Have competent supervisors	A	B	C	D	E
Be able to retire at an early age	A	B	C	D	E
Advance at a fairly rapid rate	A	B	C	D	E
Spend a lot of time with my family	A	B	C	D	E
Be promoted on the basis of ability	A	B	C	D	E
Settle down in a certain area	A	B	C	D	E
Have a definite work schedule	A	B	C	D	E
Obtain a good salary	A	B	C	D	E
Be in a competitive situation	A	B	C	D	E
Become proficient in a specialized type of work	A	B	C	D	E
Do a great deal of traveling	A	B	C	D	E
Feel that you are accomplishing something	A	B	C	D	E
Have a say in what happens to you	A	B	C	D	E
Work under consistent and intelligent personnel policies	A	B	C	D	E
Adequate job security	A	B	C	D	E

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